

Position Description
Knowledge Architect
GS-0854-15

I. Position Summary

Working in the _____ Office, Washington, D.C., the incumbent serves as knowledge architect for the National Business Center (NBC), U.S. Department of the Interior (DOI). Reporting directly to the chief technology officer (CTO), he or she manages NBC resources in a manner consistent with organizational missions, applicable laws, regulations, principles, and standards.

The incumbent provides NBC highly specialized guidance in the field of knowledge architecting and its application to the organization. He or she manages information and knowledge architecting assets enterprise-wide to improve decision-making. Knowledge architecting includes all actions to ensure collection, validation, storage, distribution, assimilation, and application of knowledge within an organization. The incumbent establishes processes and procedures for effective knowledge collection and transfer, establishes a learning environment for employees to develop skills to convert knowledge into solutions, and oversees the use of technology to capture and distribute knowledge to decision makers. This includes a vision, strategy, concept-of-operations, records management policy, data standards, systems planning, corporate databases, groupware, and security. As part of this responsibility, the incumbent addresses components of the Clinger-Cohen Act of 1996 (formerly known as the Information Technology Management Reform Act), which requires federal agencies to establish information technology (IT) capital planning processes linked to budget, acquisition, and program management and use performance-based and results-based management for IT.

Because each organization has goals that knowledge architecting can advance, the incumbent ensures that NBC creates and maintains an enterprise-wide knowledge architecting system that improves decision-making and enables the organization to address its goals. His or her duties and responsibilities incorporate many of the tenets of NBC strategic plan. The incumbent provides the vision and strategy to create, implement, expand, and maintain knowledge architecting systems, overseeing the use of state-of-the-art technology. He or she directs all aspects of the knowledge architecting effort, including the concept of operations, data standards, systems planning, corporate databases, groupware, and security.

The incumbent's work ensures that knowledge architecting systems effectively capture, codify, store, and make available employee mission-critical knowledge and electronic documents for decision makers and other NBC employees. These knowledge architecting systems support all NBC's needs for sharing and collaborating, connecting those who seek knowledge with those who have it, capturing lessons learned, and performing similar knowledge-related functions.

The knowledge architect ensures acceptance of knowledge architecting in the two organizations. He or she works with the NBC Office of Communication to develop a knowledge architecting communications plan and change management plan. The incumbent also coordinates knowledge architecting activities with the NBC chief information officer (CIO) to ensure that technology and knowledge transfer link goals and policies. He or she acquires IT resources to enhance the workforce's ability to better capture and manage knowledge.

The incumbent creates new business rules that encourage the adoption and regular use of knowledge architecting. The knowledge architect will work with training programs to

develop and implement initiatives aimed at sharing knowledge through actions such as distance learning and computer-based training. The incumbent's role will be to acquire the right IT resources to enhance the workforce's ability to gather knowledge-based information to work more efficiently and effectively. He or she also works with the organizations' training programs to develop and implement initiatives to encourage NBC managers and staff to use knowledge architecting.

The incumbent may assist NBC in other areas related to information resource management (IRM). He or she may communicate planned programs, initiatives, and approaches to IRM managers and staff to get their buy-in and allay concerns about how these plans will affect their jobs.

The incumbent represents NBC for knowledge architecting, serving on their and outside national and international committees as well as other professional forums.

II. Major Duties and Responsibilities

The incumbent is a recognized subject matter expert and consultant with a high level of technical knowledge and professional expertise in knowledge architecting. The incumbent conducts engineering studies and leads complex, innovative knowledge architecting approaches, methodologies, and technologies for the bureau. He or she identifies external issues affecting NBC and integrates them into the knowledge architecting strategic plan, including technological changes, policy, and scientific factors, and ensures the overall effectiveness of the knowledge architecting program. The knowledge architect translates management's visions and needs into plans and strategies, analyzing the policy and performance of various NBC initiatives as they relate to knowledge architecting and associated programs.

The incumbent leads NBC in a visionary, collaborative, and stakeholder-focused effort that leverages IT resources to improve knowledge architecting business processes and accomplish strategic NBC missions, goals, and program objectives. The incumbent ensures that NBC manages information and knowledge assets enterprise-wide to improve decision-making. Knowledge architecting includes all actions to ensure collection, storage, distribution, assimilation, and application of knowledge within the organization. The incumbent establishes procedures for effective knowledge collection and transfer, coordinates the activities of the organization to establish a learning environment, and oversees the use of technology to capture and distribute knowledge to decision makers.

The incumbent advises NBC heads to ensure effective knowledge architecting solutions, addresses senior management's needs, advocates innovative uses of technology, ensures the implementation of sound capital and investment planning, and facilitates management's access to knowledge resources. The incumbent stimulates the use of innovative knowledge architecting solutions by shaping strategic objectives during program planning and resource acquisition and allocation, participating in planning processes as an agent for change, and producing a strategic information resources plan, which is fully integrated into NBC's strategic plan.

The incumbent facilitates the acquisition of knowledge architecting resources, while maximizing value and managing risks. During the selection and control phases of acquiring knowledge architecting information resources, the incumbent promotes the effective and efficient design and operation of NBC's IT investment review process. This process includes collaborating with senior managers in the bureau to ensure that NBC select the appropriate knowledge architecting technology to meet business requirements.

The knowledge architect manages efforts to develop a knowledge-centric organization and ensures that knowledge architecting initiatives are adopted and resources are accessible to all NBC personnel. To achieve these goals, the incumbent champions cross-organizational

communities of practice, establishes incentive award programs for knowledge architecting, implements methods to capture tacit and explicit knowledge, and fosters cultural change through change management principles. Throughout planning, design, and implementation, the incumbent maintains strong coordination and executive and managerial support for projects that may affect multiple parts of NBC or the bureau as a whole.

The incumbent provides expert guidance and education on the merits of knowledge architecting to NBC scientists, technical experts, program managers, and executives, as well as to external stakeholders and partners. The incumbent may address complex issues that cross multiple functional areas within the bureau and may work with senior management to resolve problems. The incumbent may also provide guidance to less experienced professionals, such as lead project teams, and work with them to define needs, policies, and procedures. He or she prepares reports on knowledge architecting projects and develops briefings to convey strategic vision or policies.

The incumbent participates in or leads research into knowledge architecting. He or she keeps abreast of the state of knowledge architecting research in industry, government, and academia domestically and internationally to identify potential knowledge architecting methodologies for NBC.

The incumbent represents NBC interests at technically oriented DOI, USDA, and other national and international meetings and conferences. At such meetings, the incumbent is authorized to speak on behalf of NBC. The incumbent also participates in activities such as professional meetings, conferences, panels, and committees involving members of professional societies, other government agencies, private organizations, international bodies, and advisory committees to provide and exchange knowledge architecting and IT information.

III. Supervisory Duties

This job entails a high level of supervisory and managerial authority. The incumbent uses his or her delegated authority to create multiyear strategic plans, plan long-term staffing needs, establish program objectives and priorities, plan and schedule work, and assure implementation of program goals by subordinates. He or she advises high-level management about program directions, prepares analyses and data to support the development of goals and objectives for the group, and justifies the purchase of hardware and software.

The incumbent performs other managerial functions, including finding ways to streamline workflow, promoting team building, and improving business practices. He or she integrates the work of the group when each member contributes part of the design and execution of a product.

The incumbent determines whether contractor work meets standards needed to authorize payment.

IV. Other

This position requires initiative, exercise of independent judgment, and considerable tact in a wide variety of situations. The incumbent must possess a thorough knowledge of government-wide policies and regulations relating to knowledge architecting and IT. The incumbent must be able to negotiate and build consensus among conflicting interests and budgetary demands as well as develop a sound and responsive approach to the design, development, implementation, and maintenance of an integrated knowledge architecting system.

Factor 1: Knowledge Required By the Position

- a. *Comprehensive understanding of the basic tenets of knowledge architecting:* The incumbent must know how people learn and how knowledge assets can be used to gain efficiencies within NBC.
- b. *Theoretical knowledge of information systems technologies as well as a wide range of practical experience in the design and operation knowledge architecting systems:* The incumbent plays a leading role in the design and implementation of NBC's knowledge architecting architecture. His or her professional and technical background must be adequate to oversee the design and evaluate new methods for achieving NBC's knowledge architecting goals.
- c. *Technical ability to formulate recommendations:* To realize an effective knowledge architecting program, the incumbent must be able to visualize, correlate, and coordinate the technical aspects of many interrelated elements of information and knowledge systems, including systems with embedded information processing capabilities and other collaborative technologies.
- d. *Technical competence in information systems security (ISS):* The incumbent should have the technical understanding and competence in ISS principles and techniques, including those for communications security and computer security.
- e. *Telecommunications expertise:* The incumbent should have significant theoretical knowledge of and in-depth experience and expertise in the various telecommunications transmission media, especially those used for inter-computer communications.
- f. *Program management skills.* The incumbent must possess broad management skills, to include strategic planning, work flow analysis, goal setting and measurement, business process re-engineering, and human resource development.
- g. *Knowledge of the intricacies and interactions of working with individuals and teams with diverse cultural and professional backgrounds:* The incumbent must be able to coordinate his or her efforts with various elements within NBC as well as within the DOI. The incumbent must be able to lead the organizations through cultural change. The incumbent must have skills in facilitating and gaining organizational consensus on priorities and issues.

The incumbent must have a demonstrated ability to formulate sound recommendations relating to highly technical proposals, maintain a rapport with the most senior officials of government and industry, and understand policies and objectives promulgated by higher echelons of NBC as well as DOI and agencies of the federal government which affect NBC.

Factor 2: Supervisory Controls

The incumbent is generally recognized throughout NBC as an expert in the design and management of knowledge architecting resources and architecture. Judgment, ingenuity, and creativity must be used in accomplishing the incumbent's work. The incumbent reports to the [as yet to be determined senior executive], who provides broad guidance on policy considerations, scope, and objectives desired. The incumbent has considerable discretion to make decisions about implementing knowledge architecting in NBC.

Factor 3: Guidelines

Guidelines under which the incumbent works include federal and DOI IT and human resources regulations, directives, and policy. The incumbent is also guided by the broad framework of principles and standards prescribed by the General Accounting Office, the Office of Management and Budget (OMB), the Office of Personnel Management, and other

regulatory agencies; by basic laws and appropriation acts; and by generally recognized principles and standards.

Much of the work required of the incumbent lacks precedent, so judgment and discretion must be used in applying, adapting, changing, or interpreting guidelines. Strategic guidelines are very broad (NBC Strategic IT Plans, OMB Circular A-11, National Institute of Standards and Technology requirements, and NBC director's long-range goals). As needed, he or she develops new policies, procedures, and approaches, taking into consideration government and NBC regulations.

Factor 4: Complexity

The incumbent provides comprehensive support to NBC as a technical expert in applying knowledge architecting methodologies to functional problems to achieve maximum staff productivity. He or she applies expert knowledge of policy and methods for information systems, business process improvement, benchmarking and good practices, program and project management, and strategic planning. The incumbent may develop knowledge architecting strategies in collaboration and networks, content management, e-Government, expertise locators, good practices, knowledge sharing and reuse, e-Learning, lessons learned, and systems thinking.

The incumbent develops a knowledge architecting program that identifies and makes available knowledge, decision support, and expertise for employees through sharing knowledge and expertise among themselves, with other parts of NBC, with other DOI bureaus, with other federal agencies, and with outside organizations. The work has a direct impact on major mission areas of NBC including, for example, research and development, information security, and programmatic areas such as fire safety to maintain NBC's leadership in all aspects of land management.

Because knowledge architecting approaches and technologies are relatively new and still evolving, the incumbent monitors the field for new developments and incorporates these into planned designs. These may include developing precedent-setting approaches to how federal agencies might integrate knowledge architecting into their organizations. The position requires intense interactions with the full range of offices within the NBC and DOI for technical issues, planning, acquisition, allocation, reporting, monitoring, review, and implementation. The incumbent's responsibility has broad and critical implications and therefore requires knowledge of an extensive body of laws, regulations, and decisions as well as the legislative process. The incumbent provides guidance to both NBC chief of staff and the CIO on complex questions and issues, which must be perceived, interpreted, and correctly applied to ensure proper formulation of NBC's positions.

Factor 5: Scope and Effect

The work performed by the incumbent will result in the creation and sharing of knowledge about the nation's land management sector for DOI. This work is crucial to the success of the nation's land management system in an age of growth, increasing complexity, and decentralization. The opportunity to share land management knowledge with other agencies within DOI and with external organizations, stakeholders, and partners should enhance problem-solving and collaboration and result in increased work efficiency and effectiveness. For example, a knowledge architecting system may help diverse organizations identify causes of fires, which could reduce fatalities, injuries, and financial losses as well as help the two agencies respond more efficiently and effectively.

The incumbent leads the planning, budgeting, selecting, and implementing of knowledge architecting solutions to meet the demands of NBC business processes. The incumbent

provides expert guidance on NBC IT architecture initiatives, as they relate to knowledge architecting.

This work requires extensive coordination and support with other experts in NBC program offices. The incumbent leads diverse teams of functional and technical experts plus possibly contractors. The incumbent may manage complex contracts to ensure they result in appropriate services and products.

The incumbent often represents NBC as a principal point of contact to provide advice and guidance on the application of knowledge architecting policies and procedures. He or she develops white papers and briefings and attends meetings and conferences to convey strategic vision or policies to internal and external audiences. The incumbent serves as an expert representative at conferences, meetings, technical symposiums, and seminars with a wide range of parties.

Factor 6: Personal Contacts

The incumbent interacts with a broad spectrum of individuals and organizations both within and outside of government, including senior NBC executives; representatives of other departments such as DOI; congressional staff; employees of other federal, state, and local government agencies, and academia; and key stakeholders and partners in the private sector. As several foreign organizations and governments have extensive experience with knowledge architecting programs, the incumbent assures sharing of important knowledge architecting research and to establish relationships. He or she ensures that the knowledge architecting will better enable document sharing with international research organizations and will in return help the bureau manage its records and documents.

The incumbent's responsibilities require a high degree of interaction with this broad range of individuals and organizations as well as the establishment of new working relationships and collaborative efforts with similar groups. He or she also works with foreign government officials and members of international organizations to assure sharing of important research and to establish relationships.

Factor 7: Purpose of Contacts

Contacts are internal and external. The incumbent maintains working relationships with high-ranking officials of federal and state agencies, industry, academia, and key stakeholders and partners in the private sector. The purpose of these contacts and relationships is to develop and coordinate policy and procedures for institutionalizing knowledge architecting operations for NBC

The incumbent maintains liaison with counterparts in DOI to maintain expertise necessary to apply new and developing knowledge architecting concepts, techniques, and programs to the complex and rapidly changing environment of NBC. The incumbent maintains contact with federal agency counterparts and industry leaders domestically and abroad to promote knowledge architecting in the federal government, justify expenditures of NBC resources, and coordinate these organizations' activities to leverage technology advancements of other organizations. The incumbent serves as the principal NBC point of contact and liaison to senior level working groups outside the organization including key stakeholders and partners in private industry on knowledge architecting and other related matters.

Factor 8: Physical Demands

The work is sedentary. Occasional travel may be required.

Factor 9: Work Environment

The work is performed in an office setting. Occasional and intermittent travel for official purposes is required as necessary.

Other Requirements

The incumbent will be required to complete the OGE Form 450 "Confidential Financial Disclosure Report" to determine if a conflict or an appearance of conflict exists between the incumbent's financial interests and the prospective and influential position with procurement oversight.

As the incumbent deals with complex privacy issues, the position is designated as Critical Sensitive and requires a Top Secret clearance.